

STATEMENT OF WORK

Energy and Water Audit for the United States Consul General Residence, Vancouver Procurement 4587625

August 2015

United States Department of State

STATEMENT OF WORK (SOW)

CONTRACT #: SCA77015QXXXX

Energy & Water Audit August 2015

United States Chief of Mission Residence, Ottawa

1.0 Introduction

1.1 Overview: The U.S. Department of State (the Department) requires professional Engineering services to provide an energy and water audit (Audit) of facilities located at United States Consul General Residence, Vancouver as further detailed in Exhibit A: Project Description.

1.2 Goal: The goal of this SOW is to execute audit services that meet the guidelines of the U.S. industry standard established by the American Society of Heating, Refrigeration, and Air-Conditioning Engineers (ASHRAE), and produce a streamlined report in a prescribed and uniform format.

1.3 Federal Performance Goals (FPGs): The primary objective of the Audit is to provide specific guidance to improve of facility energy and water performance, in support of the Bureau of Overseas Buildings Operations' (OBO) efforts toward meeting the following specific FPGs for existing buildings as noted below. The Contractor shall perform the Audit to improve facility performance, in alignment with the environmental stewardship policy stated in Executive Orders (E.O.) 13423, 13514, and 13653, in addition to the Energy Independence and Security Act (EISA) of 2007 and the Energy Policy Act (EPAct) of 2005. (See Appendices for additional details and references.)

1.3.1 Reduce building energy intensity by 20% below ASHRAE 90-1 2007, or an Energy Star rating of at least 75.

1.3.2 Install renewable energy generation systems, where feasible, to achieve 20% renewable energy sources by 2020.

1.3.3 Install automatic utility metering and advanced electric sub-metering for all federal facilities over 464 square meters (5,000 square feet).

1.3.4 Reduce greenhouse gas (GHG) emissions by 20% by 2020, from 2008 levels.

1.3.5 Reduce indoor potable water consumption intensity by at least 20% below EPAct

1.3.6 Reduce outdoor potable water consumption for irrigation by 50% from a conventional baseline.

1.4 Classification of Material: All work described in this Task Order shall be limited to Unclassified.

1.5 Qualifications: The Department requires energy management professional services including engineers who are experts in buildings operations and maintenance as defined under 1.5.1 below. The Contractor may propose alternative equivalent practical experience, qualifications, or credentials for consideration. Further, Audit activities may be performed by a single auditor or multiple auditors at the discretion of the Contractor, as long as qualification requirements under 1.5.1 are met. The Contractor must document the following qualifications of the auditor(s) within their proposal:

1.5.1 Minimum of five years' experience in the field of building energy management and is a licensed professional engineer (PE), and be a Certified Energy Manager (CEM). This professional shall perform the assessments and audits, and shall therefore have experience with mechanical and electrical systems, Building Automation Systems (BAS), commissioning, and building measurement and verification as follows:

1.5.1.1 Familiarity with ASHRAE's Procedures for Commercial Building Energy Audits (2011) and has access to ASHRAE publications as well as others that to with performance of the tasks identified in Exhibit A.

1.5.1.2 Experience with analysis of historical energy and water billing, meter data, and consumption.

1.5.1.3 Expertise in operations and analysis of building systems including envelope, lighting, HVAC, domestic hot water, prime power generation, laundry, food preparation, conveying systems, and other systems as appropriate for the properties included in this SOW.

1.5.1.4 Ability to assess building and system performance in comparison to other similar buildings and systems, in order to determine opportunities for increased efficiencies.

1.5.1.5 Expertise in recommending energy conservation measures (ECMs), water conservation measures (WCMs), renewable energy measures (REMs), and other system optimization strategies, in conjunction with preparation of engineering analysis and economic calculations to evaluate potential costs and benefits.

1.5.1.6 Proven ability to clearly identify and present low-cost/no-cost measures, as well as medium- and high-cost strategies.

1.5.1.7 Strong verbal and written communication skills. Note that reports are required to be submitted in English.

1.5.1.8 Past experience with ASHRAE audits is beneficial.

1.6 Report Template, Tools, and Resources: The Contractor shall use the attached templates, tools, and resources provided as part of this SOW and summarized below. The purpose of the templates, tools, and resources is to streamline the reporting process, while allowing the Department to make consistent comparisons between projects by reducing the time required for reviewing reports.

1.6.1 Project Description (Exhibit A): The Contractor shall reference Exhibit A to identify specific analysis and assessments required for this project scope, as well as the buildings included in those assessments.

1.6.1.1 The Contractor shall survey only the buildings identified in Exhibit A. These facilities are identified by unique identification number in the Department's Real Property Assessment (RPA) where their general description, including area, stories, age, and systems reside. Any buildings, sites, or individual units not identified in Exhibit A shall not be included in the proposal associated with this SOW.

1.6.1.2 The Contractor shall perform the tasks identified in Exhibit A as required for the specified building(s). The Contractor shall include the information from the Meter Assessment and Utility Data Gathering tasks in the report.

1.6.1.3 The Contractor shall not perform additional efforts beyond those identified in Exhibit A, unless directed in writing by the Contracting Officer (CO).

1.6.2 Energy and Water Audit Report (Exhibit B): Exhibit B is a Microsoft Word document that has been provided as an overall template to establish the structure, content, and analysis required to be prepared by the Contractor for each task.

1.6.2.1 The Contractor shall record the results of the Audit in Exhibit B under the applicable section(s).

1.6.2.2 The Contractor shall reference the examples contained in the Exhibit B to better understand desired content and level of detail required in the report. Additional content beyond the example may be necessary, depending on specific project considerations.

1.6.3 Energy and Water Audit Report Output Toolkit (Exhibit C): The tools in Exhibit C, are Microsoft Excel files that contain standard tables that must be used by the Contractor to produce the Energy and Water Audit Report. These output tables represent the minimum metrics that are to be calculated and provided by the Contractor.

1.6.3.1 Exhibit C includes five Excel workbooks with multiple tabs in each:

- Building Information Tool
- Utility Analysis Tool
- Meter Assessment Tool
- Renewable Energy Tool
- Life Cycle Cost Analysis Audit Tool

1.6.3.2 The Contractor must complete the tables, including the Life Cycle Cost Analysis (LCCA) tool, for all tasks included in Exhibit A.

1.6.3.3 The Contractor is responsible for the collection, calculation, tabulation, and input of data contained in Exhibit C.

1.6.4 Contractor Pricing Tool (Exhibit D): The Contractor must use the Microsoft Excel template provided in Exhibit D to submit pricing estimates for this SOW.

1.6.4.1 Neither deletion of elements nor modification of subtask descriptions within Exhibit D is permitted.

1.6.4.2 Where a task is not included in the SOW, the Contractor shall clearly indicate in the Key Assumptions field any task that is ‘not in contract’.

1.6.5 Project and On-site Schedules (Exhibit E): Contractors must complete and submit project and onsite schedules, similar in format to those shown within Exhibit E. See Section 4.0 below for further detail.

1.6.5.1 The Contractor shall provide their proposed project schedule in their project action plan. The project schedule shall outline the dates and date ranges for the activities and tasks outlined below in Section 5.0 Schedule and Milestones. The project schedule should also include the onsite schedule, which shall identify daily tasks of the Audit and highlight activities that require participation by Post staff.

2.0 Site Visit Overview

2.1 Scope: The Contractor shall perform the Audit as outlined in Exhibit A during one single or multiple-day visit to Post.

2.1.1 The Contractor’s fee proposal shall indicate the duration of the site visit and include direct trip expenses.

2.1.2 Multiple site visits are not permitted unless specifically approved in advance and in writing by the CO.

2.2 Pre-Site Visit Preparation and Planning: The Contractor shall coordinate with the COR to make necessary arrangements for the site visit.

2.2.1 With assistance from the COR, the Contractor shall coordinate logistics related to the site visit in advance, including:

2.2.1.1 Confirming that there are no conflicts with the proposed Audit scope or schedule at Post.

2.2.1.2 Scheduling details of the site visit related to facility or system access.

2.2.1.3 Submitting requests regarding meetings with Post personnel.

2.2.1.4 Obtaining visas and country clearance, if required.

2.2.2 As noted in the Estimated Project Schedule (refer to section 4.0 Schedule and Milestones), the Contractor shall hold pre-trips phone calls with Post, including:

2.2.2.1 An orientation call serving as the project kick-off meeting with the CO, Contracting Officer’s Representative (COR), and Post’s Facility Manager (FM); and

2.2.2.2 A pre-trip coordination call with the COR and Post's FM prior to the site visit, to confirm logistics, such as schedules, onsite meeting attendee requests, and building access requirements.

2.2.3 Non-site meetings may take place by teleconference or at the Contractor's offices. For each meeting, the Contractor shall:

2.2.3.1 In coordination with the COR, provide the agenda prior to the date of the meeting.

2.2.3.2 Prepare minutes of each meeting and shall submit an electronic copy to the COR within five (5) work days after each meeting.

2.3 Pre-Site Visit Project Context Review: Before the site visit, the Contractor shall coordinate with the COR to obtain relevant information for the site, such as, but not limited to, site plans, climate data, programming, building plans, maintenance reports, system surveys, and utility rate information including escalation rates.

2.3.1 Post shall provide the Contractor with a minimum of 12 and up to 36 months of utility data, to allow benchmarking of all facilities identified in Exhibit A.

2.3.2 The Contractor shall review data in preparation for the site visit as indicated in section 3.2 (Utility Data Gathering) and as described in the Energy and Water Audit Report (Exhibit B).

2.4 In-Brief: Before the initial site walk-through, the Contractor shall lead a meeting at Post with management and staff to discuss the scope, schedule, general requirements, and goals of the Audit.

2.5 Site Walk-through: After the in-brief, the Contractor shall conduct a preliminary facility walk-through with Post's COR/FM to review the Audit scope and record general observations.

2.6 Personnel Meetings: After the site walk-through, the Contractor shall conduct meetings with relevant Post personnel, including, but not limited to: FM, General Services Officer (GSO), and Locally Employed Staff (LES) responsible for specific system operations. The goal of each meeting is to discuss details of existing systems in order to:

2.6.1 Inform the Audit and report recommendations for system modifications, retrofits, or replacements to improve performance in alignment with FPGs.

2.6.2 Observe, document, and understand Post's Standard Operating Procedures (SOP).

2.7 Out-Brief: At the end of the site visit, the Contractor shall prepare, lead, and present an out-brief site visit summary to Post management and staff, outlining site visit successes and challenges, survey scope and findings, recommendations for Post operations and maintenance, and potential projects that Post could implement to improve performance.

3.0 Deliverables

3.1 Completeness of Deliverables: The Contractor shall review each deliverable for conformance to this SOW prior to submittal. The Contractor shall take particular care to ensure that the documents are

coordinated and complete. Any submittal found by the COR to be unsatisfactory according to the requirements of this SOW, including incomplete content or multiple punctuation or grammar errors, may be rejected and shall be revised and resubmitted prior to proceeding with related subsequent work.

3.2 Trip Report: The Contractor shall provide a trip report that outlines the activities performed during the Audit no more than fourteen (14 calendar days) after returning.

3.2.1 This report shall summarize the schedule of Audit activities, findings, recommendations, and minutes for meetings and interviews conducted at Post.

3.2.2 The Contractor shall provide the Trip Report to Post and the COR in electronic format.

3.3 Energy and Water Audit Report: The Contractor shall prepare a report prepared according to the template provided in Exhibit B, and using the tables provided in Exhibit C. The Contractor shall provide submittals at the following stages:

3.3.1 90% Submission: The Contractor shall submit the draft report for review and comment by the COR. The COR will review comments with the Contractor at a 90% review meeting per the project schedule.

3.3.2 Final Submission: The Contractor shall provide a final report per the project schedule.

3.4 Submittal Format: The Contractor shall provide electronic reports in their native file formats to the COR at Post, and shall deliver one consolidated electronic file for the entire Energy and Water Audit Report in PDF as well as editable format.

3.5 Reviews: Each submittal required shall be reviewed by pertinent Department disciplines. Review comments consolidated by the COR, and transmitted to the Contractor for resolution. The Contractor's written response shall be provided within five (5) days of transmission from DOS, as noted in Section 4.0 Schedule and Milestones.

4.0 Schedule and Milestones

4.1 Schedule: The Contractor shall propose a project action plan, in accordance with items below, to the COR via email 14 days after Notice-to-Proceed (NTP). The plan shall be prepared by the Contractor documenting due dates for Submittals (based on calendar days – Saturdays, Sundays, and holidays included) from issuance of the NTP.

Estimated Project Schedule Calendar Days After NTP

- 1. Notice to Proceed (NTP) 0**
2. Contractor orientation conference call with Post +7
3. Proposed project schedule +14
4. Post proposed onsite schedule and conference call with Post +21
- 5. Audit begins +28**
- 6. Audit ends +35***
7. Trip Report from Post site visit +49
8. 90% Audit Report +70
9. DOS Review of 90% Audit Report +80
10. Contractor Evaluation of DOS Review +85

11. Comment Resolution Meeting +90
12. DOS back check of review +95
13. Final Audit Report +109
14. Task closeout with Post +120

*Site survey duration is assumed to be seven (7) calendar days. Individual site survey times may vary based on facility size and tasks required.

4.2 Project Schedule Chart: The Contractor shall provide a proposed project schedule to the COR. Refer to Exhibit E.

4.3 Meetings: The following non-site meetings shall take place by teleconference or at the Contractor's offices:

4.3.1 Kick-off meeting/orientation call: The goal of the kick-off meeting is to review the source documents and this SOW, establish project goals, and plan the site visit(s).

4.3.2 Pre-trip call prior to site visit: This meeting shall be scheduled a minimum of one week prior to departure.

4.3.3 Comment resolution call for 90% review.

5.0 Contract Administration

5.1 General: The designated COR for this SOW is Mr. Matthew Frengs. All deliverables and administrative matters regarding this task order shall be directed to the COR at Mr. Matthew Frengs, 107-280 Nelson Street, Vancouver, BC V6B 2E2 / Office Phone, 604-642-6678 / email - frengsm@state.gov

5.2 Proposal Submittal: The Contractor shall submit a proposal which includes the following:

5.2.1 Description of approach and scope for tasks as noted in Exhibit A, itemized separately.

5.2.2 Completed Auditor Pricing Tool including travel expenses (Exhibit D)

5.3 Additional Information and Exhibits: The following documents have been provided by the Department. These Exhibits are part of this SOW. Other documents are provided as information supplemental to this SOW.

5.4 Exhibits:

- 5.4.1 Exhibit A: Project Description
- 5.4.2 Exhibit B: Energy and Water Audit Report Template
- 5.4.3 Exhibit C: Energy and Water Audit Report Output Tool Set
- 5.4.4 Exhibit D: Auditor Pricing Tool
- 5.4.5 Exhibit E: Project and On-site Schedules

End of SOW